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## HIV Transmission: Possible Mucous Membrane Exposure to Contaminated Blood

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In the July 11, 1997 issue of the *Morbidity and Mortality Weekly Report* (MMWR), the CDC published a report on an HIV infection that may have resulted from the exposure of mucous membranes to contaminated blood.<sup>1</sup> This infection is an unusual one because the investigators think that blood infected with HIV mixed with and contaminated saliva. The contaminated saliva was then transferred while kissing.

The infection involves the female partner of an HIV positive man. The man had been aware of his HIV status since 1988. In 1992 the two enrolled in a study of couples in which only one partner was HIV positive. The study involved extensive counseling, periodic HIV testing, and responding to questionnaires.

During the study, the couple reported practicing safe sex and the woman had no other known transmission risks including, in part, injecting drug use, other sexual partners, blood transfusion, and occupational exposure to HIV. The man "...reported longstanding poor dentition and occasional sores in his mouth."; he also reported that his gums frequently bled after brushing and flossing. According to the report, "The couple engaged in 'deep kissing' (open-mouth to open-mouth) several times each month." (p. 621).

The woman was HIV negative by the results of a test done in July, 1994 but had become positive by the time a subsequent test was done in September, 1995. In early August, 1994, she received care for a dental condition that required a root canal. In late August she became ill with fever, headache, swollen lymph nodes, and sore muscles in her neck, back and legs. According to the editorial note accompanying the case report, these "...symptoms were consistent with acute retroviral syndrome" (p. 622).

Because other transmission routes were less likely (though not ruled out) and because laboratory tests showed that the viral strain in each partner was highly similar, the investigators concluded that the man transmitted the virus to the woman. Exposure of mucous membranes to contaminated blood from the man's gums or a lesion was the likely source of the woman's HIV infection.

The investigation of this infection "...underscores the multiple routes by which exposure to infectious body fluids can occur among sexually intimate persons" (p. 623). In light of the suspected mode of transmission in this case, CDC urges educating people about the possibility of infection through mucous membrane exposure and any "other body fluid visibly contaminated with blood" (p. 623). There are no known cases of saliva, by itself, being the route of HIV

infection. However, this case illustrates that caution needs to be taken to avoid exposure to contaminants in saliva.

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<sup>1</sup> Paiden, N., and S. Glass. Transmission of HIV Possibly Associated with Exposure of Mucous Membrane to Contaminated Blood. *MMWR* 46(27):620-623; July 11, 1997.